

Free

1967
ANNUAL REPORT
TEXAS INSTRUMENTS
INCORPORATED





RESEARCH



MATERIALS



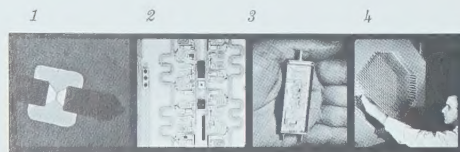
COMPONENTS

THE BUSINESS OF TEXAS INSTRUMENTS

Anticipating and solving customers' problems through innovation in creating, making, and marketing products and services is the business of Texas Instruments.

Solutions to the technological problems of today, and those emerging, go beyond the mere production and sale of technical goods and services. They require mobilization of capability in many fields of science and technology, and the ability to unify this diversity and support it with physical and human resources. TI's role, as an international manufacturing and service organization, is to provide such capability to its customers and thus to society.

The pictures across the top of these pages illustrate the high degree of vertical integration that enhances TI's ability to anticipate and solve such problems for its customers: from **Research** at the structure-of-matter level, to **Materials**, to electrical and electronic **Components and Controls**, to **Equipment** and systems, and to **Services** which employ these systems.



Cover

Integrated electronics technology improves radar performance while increasing reliability. Pictures show (1) close-up of diode [shown 110 times actual size] in (2) high-frequency circuit which performs switching function within (3) transmit/receive module, one of 604 installed in (4) prototype solid state radar system to be delivered to the U. S. Air Force in 1968.

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The information contained in this report is not given in connection with any sale or offer of, or solicitation of an offer to buy, any securities of the company. This report is not to be deemed a part of any proxy-soliciting material furnished to shareowners.



CONTROLS



EQUIPMENT



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CONSOLIDATED FINANCIAL SUMMARY

*In Thousands of Dollars
(Except earnings, dividends, and book
value per share which are in dollars)*

| | 1967 | 1966 |
|---|------------|------------|
| Net sales | \$568,507 | \$580,314 |
| Income before taxes and other provisions | 41,098 | 63,722 |
| Net income | 22,855 | 33,954 |
| Earned per common share | | |
| — outstanding at year-end | 2.10 | 3.14 |
| — average outstanding during year | 2.11 | 3.30 |
| Dividends declared on common stock | 8,687 | 5,937 |
| — paid per common share | .75 | .55 |
| Current assets | 242,915 | 253,705 |
| Current liabilities | 97,520 | 112,142 |
| Working capital | 145,395 | 141,563 |
| Property, plant, and equipment (less accumulated depreciation) | 138,883 | 123,752 |
| Long-term debt | 54,265 | 51,935 |
| Shareowners' equity | 234,134 | 217,320 |
| Book value per share of common stock outstanding at year-end | 21.53 | 20.12 |
| Common shares | | |
| — outstanding at year-end | 10,877,119 | 10,800,240 |
| — average outstanding during year | 10,845,663 | 10,291,973 |
| Employees at year-end | 38,736 | 38,686 |
| Shareowners at year-end | 20,065 | 19,903 |



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Photomicrograph of gallium arsenide material developed in TI laboratories for new generations of microwave and opto-electronic components.

TO THE SHAREOWNERS OF TEXAS INSTRUMENTS INCORPORATED:

Texas Instruments sales billed for 1967 were \$568.5 million, 2% below sales billed of \$580.3 million in 1966. Net income was \$23 million, compared to \$34 million in 1966. Earnings per common share were \$2.10 on 10,877,119 shares outstanding at year end, compared to \$3.14 per share on 10,800,240 shares outstanding at the end of 1966. Total backlog at year-end 1967 was \$306 million, up 27% from \$241 million a year earlier.

This Annual Report describes a year with disappointment in some areas, but also with important advances in products and services, in management planning and control, and in new programs for more effective utilization of resources.

In September, the company announced a restructuring of the organization around ten operating divisions within three Groups: Materials and Services, Components, and Equipment. Each is managed by a Group Vice President who has had broad experience through previous assignments in TI. This new structure was designed to emphasize the company's growth objectives and the strategies and tactical action programs which have been developed to achieve them. Throughout this report you will find references to the nature and significance of these actions.

Total Technical Effort

The company's future continues to depend principally upon development of problem-solving products and services. Because innovation is

keyed to directed effort over long periods of time rather than to overnight breakthroughs or periodic bursts of activity, TI has sustained its emphasis on programs for future growth.

Expenditures for total technical effort slightly exceeded \$100 million in 1967, compared to \$79.6 million in 1966. Of the total, approximately 55% was supported by outside contracts, chiefly with the U. S. Government.

Representative results include the following: **Single-crystal rods of silicon** have been grown directly from the gaseous state, bypassing the intermediate polycrystalline step. Although still in the laboratory, the new process promises important cost reductions and possible quality gains in producing this semiconductor material. Through related technology, pure quartz shapes are being fabricated directly without intermediate forming. When fully developed, this will open new markets for TI in the chemical processing and optical fields.

Solid state microwave components not only contribute to gains in radar performance but are expected to improve the reliability of "next generation" radars by more than ten times. Several new microwave components developed for the MERA (Molecular Electronics for Radar Application) program of the U. S. Air Force are expected to be in production in the early 1970's for radars and other microwave systems.

Large Scale Integration (LSI), a technology for combining many hundreds of transistors, diodes, and other electronic devices in a single slice of

silicon, offers improvements in cost and reliability of electronic equipment even more important than the advantages of size reduction. Although still in the development stage, the products of LSI promise to be as revolutionary an advancement over integrated circuits as integrated circuits were over transistors. Of special significance was the initial delivery to customers of prototype LSI arrays using computer-generated interconnection patterns on the slice.

The company believes that integrated electronic components, such as those represented by LSI arrays and solid state MERA modules, will broaden the use of electronics into all sectors of society and spawn a whole new generation of institutions which use electronics to solve their own and customers' problems.

A new electronic camera tube, based on original work at the Bell Telephone Murray Hill Laboratories and further work at TI to take advantage of its response to infrared energy, will provide a significant margin of improvement in military infrared reconnaissance systems. The TIVI-CON* tube illustrates how TI calls on diverse but vertically integrated capabilities to solve customer problems beyond the capability of most organizations. The new tube is an Equipment Group product using as sensing elements 300,000 diodes fabricated by the Components Group on silicon semiconductor material grown by the Materials and Services Group.

Improvements in laser display continued during the year. TI delivered to the Air Force a system

*Trademark of Texas Instruments.



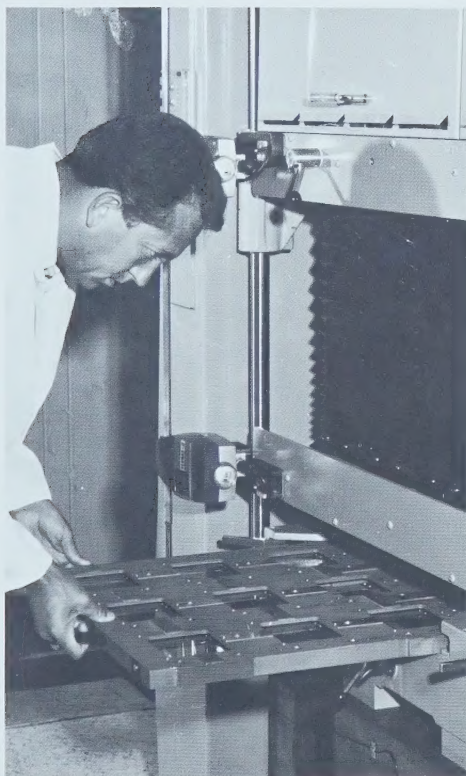
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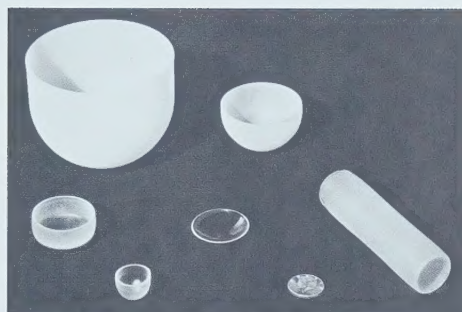
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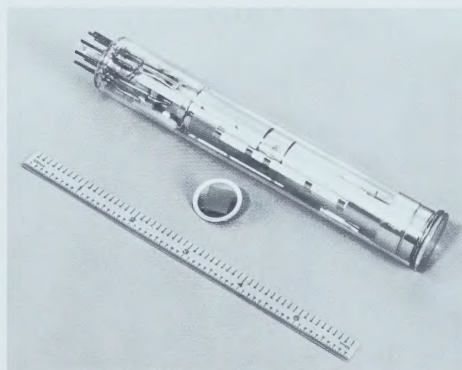
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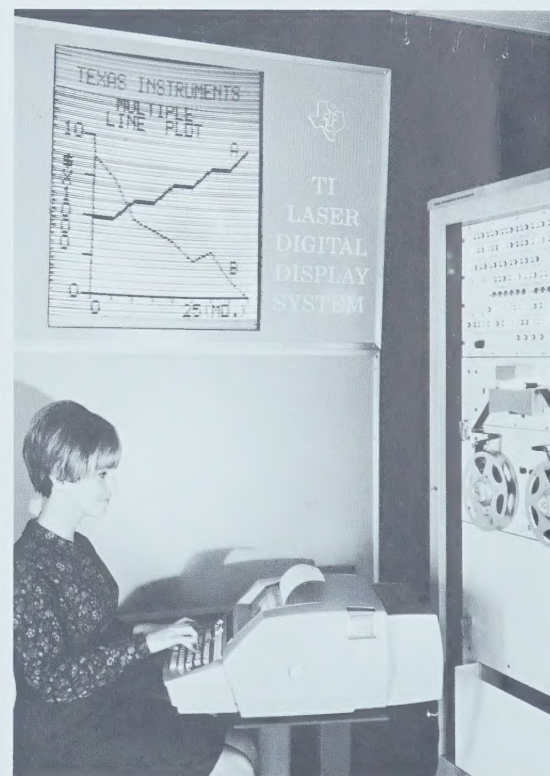
Advanced photographic equipment with accuracies of five millionths of an inch, designed and built by TI, produces photomask patterns for integrated electronic components.



Crucibles, tubes, and other shapes of pure quartz produced directly by vapor deposition without intermediate forming.



Night vision capability is enhanced by this new electronic camera tube. Array (center) contains 300,000 silicon photodiodes to sense infrared energy.



Laser system provides large screen display of data stored in computer.



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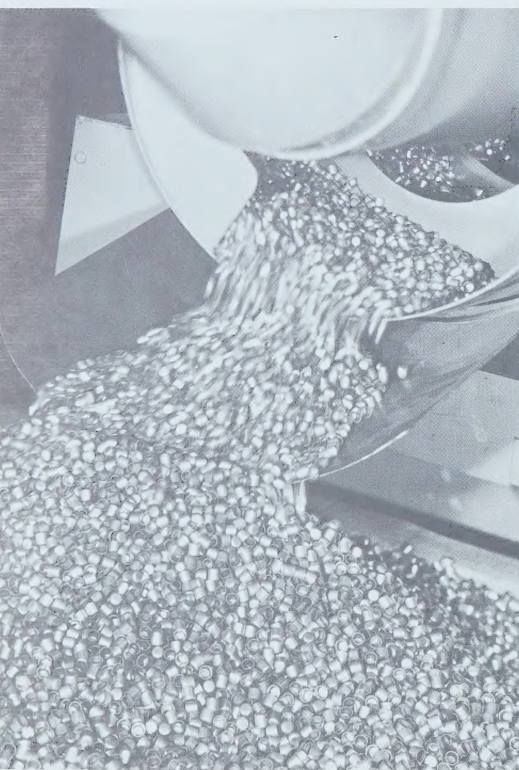


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Single-crystal silicon rod is grown directly from gaseous state.



Volume-produced clad metal cups for .50-caliber bullet jackets substantially reduce copper requirements for small arms ammunition.

which employs laser light to project a large-screen color display of signals from such sources as a television broadcast. Another laser display system, using a computer memory, is being developed which permits calling up, viewing, storing, and recalling such data at will. This information can be projected and easily read on a screen in a lighted room.

Materials

The Materials activities of Texas Instruments are carried on by the Metallurgical Materials and Chemical Materials divisions, both a part of the new Materials and Services Group.

Metallurgical Materials Division

Sales of clad metals were affected adversely by the general sluggishness of the economy and by heavy customer inventories built up in 1966 for such items as copper-clad aluminum magnet wire, bimetal contacts, and vacuum tube parts. Orders for clad-metal products from manufacturers of appliances and automobiles also were slow, more than offsetting modest increases in shipments to manufacturers of government equipment.

Though anticipated, there was a significant drop in shipments of clad metals upon completion of TI's contract to supply clad coinage material to the U. S. Mint. In addition, other customers decided to delay expenses required to change over from solid metals to clad metals because of business uncertainty, and the easing of the copper shortage early in 1967 took some momentum from TI's programs to supply copper-clad materials as replacements for solid copper.

The strike in the U. S. copper industry in the last half of 1967 has caused renewed interest in some of these programs. Texas Instruments is helping conserve copper by producing clad bullet jackets for small arms ammunition. Production started in limited quantity in July and has increased each month since then. These copper-alloy clad-steel jackets reduce copper requirements by about 80%.

Business for copper-clad aluminum wire in community antenna TV systems and TV picture tube yokes is expected to pick up in 1968. Other products which will contribute to growth of the metallurgical activity include nickel-cadmium batteries for aerospace and industrial applications, connectors for integrated circuits, and copper-clad stainless steel sheets for new building construction programs.

Chemical Materials Division

Demand for semiconductor grade silicon produced by this division was slowed by the large inventories built up by semiconductor manufacturers during 1966. Shipments increased during the fourth quarter, however, and this upward trend is expected to continue through 1968, principally because of rapid growth in requirements for integrated circuits.

The semiconductor industry is changing from 1¼-inch to 2-inch diameter silicon slices to reduce semiconductor production costs. The Chemical Materials division increased its capacity to produce the larger diameter slices and has been a leading supplier to semiconductor manufacturers in this conversion.

The advent of integrated circuits has created



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significant new market opportunities for TI as a supplier of interconnection systems. Multilayer circuit boards, designed by computer, reached production during 1967. These boards provide the several layers of patterns necessary to interconnect large numbers of integrated circuits. Operating directly from equipment engineer design requirements, the computer lays out optimum interconnection patterns and controls machine fabrication of the circuit board. This reduces design time by several weeks.

Components

The new Components Group includes four operating divisions: Control Products, Semiconductor Circuits, Electronic Devices, and European Semiconductor divisions.

During 1967, it became increasingly apparent that the opportunity exists for the Components Group to help its customers develop unique solutions to their systems problems beginning at the materials or basic semiconductor technology level. This generates an increasing challenge for the components industry, since it demands closer coupling with the equipment manufacturer earlier in the design cycle. In exchange, it considerably broadens the product and service opportunities.

The Components Group has been preparing itself for this changing environment and during the year established a new business development activity which, in addition to conventional marketing functions, includes a customer requirements center. This center is designed to respond quickly to complex customer problems, drawing upon all of the technical disciplines within the company.



Integrated circuit production capability expanded in 1967. New super-clean rooms provide controlled environment for critical process steps.



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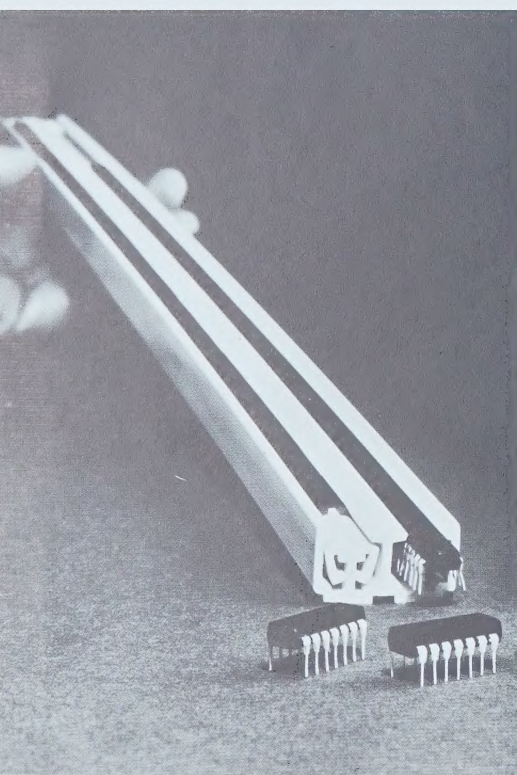


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Skilled operator performs intricate positioning step during assembly of integrated circuits.



Special shipping carriers for plastic integrated circuits simplify handling at customer's assembly line.

Semiconductor Circuits Division

Although the U. S. semiconductor market was down slightly, the integrated circuits market, which is served by this division, continued its brisk growth in 1967 with a 55% increase from the preceding year.

Largely because of widespread acceptance of its TTL (Transistor-Transistor Logic) digital integrated circuits and additional complex-function circuits in low-cost plastic packages, TI steadily improved its market position. Plastic-packaged integrated circuit amplifiers introduced in 1967 are expected to increase participation in the rapidly expanding industrial instrumentation and control markets.

Computer manufacturers are well advanced in designing the new "third generation" computers, and TI is working closely with most companies in this field. A large number of different custom integrated circuits will be placed in production for these customers during 1968.

To customers producing equipment for the government, TI offered many new products, including high-speed and low-power versions of TTL. The company's special skills in component reliability control and program management are most pertinent to critical military and space programs such as the guidance and control systems for the Sentinel and Poseidon missiles. These and other new systems will assure continued growth in integrated circuit requirements in this market segment.

Electronic Devices Division

Sales of discrete semiconductor devices such as transistors and diodes produced by the division declined in 1967, along with sales of the entire

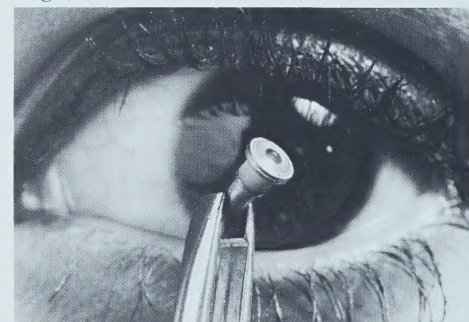
industry. The decline in the discrete semiconductor device market in the U. S. was somewhat larger than anticipated.

Integrated circuits began to displace transistors and diodes in new equipment placed into production. It is estimated that this displacement alone accounted for a drop of 11%, or more than \$100 million, in U. S. discrete semiconductor device business during 1967.

Sales of consumer durable goods leveled off during the year. The slower growth in the home entertainment field adversely affected the economy transistor market.

Sales of special-purpose products such as diode arrays for computer memories and solid state light emitters for optical communications equipment improved.

Among new products introduced were high-power, high-frequency silicon transistors developed by TI's research staff in Bedford, England.



This tiny avalanche photo diode acts like an "eye" for new laser communications equipment.



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TI-designed solid state control for three-way socket varies light intensity of ordinary bulb.

European Semiconductor Division

In 1967, the company's European semiconductor operations grew, especially in the field of integrated circuits. Continued economic strength in France and Italy was tempered by reduced growth rates in the United Kingdom, Scandinavian, and German economies, but each of the three TI semiconductor operations in England, France, and Germany achieved record sales in the year.

TI enlarged its European Semiconductor plant capacity by 25% during 1967.

Control Products Division

Control products markets served by Texas Instruments experienced conflicting changes during 1967. Sales of military and industrial controls improved because of increased demand in the aerospace and communications markets. A firming trend in the production of household appliances in the fourth quarter partially offset earlier softness and the division's overall operations approximated the record business level achieved in 1966.

The semiconductor power device activity was placed in the Control Products division to accelerate the application of solid state products in control functions presently performed by electromechanical components. During the year, the company developed a line of semiconductor power control devices for manufacturers of appliance, refrigeration, and heating controls, and for portable power tools.

Business outside the U. S. continued to expand. The Control Products activities in Europe, Latin America, Canada, and Australia all recorded gains for the year.



Electric motor controls manufactured in Italy are shipped to customers throughout Europe. TI has electrical and electronic components plants in 11 other countries.



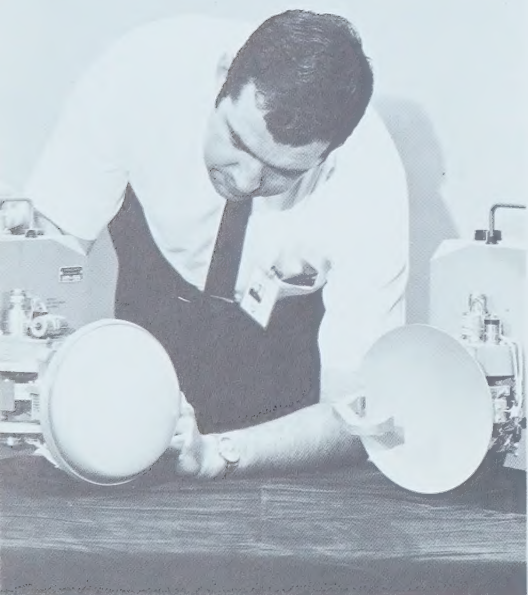
RESEARCH



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Terrain-following radar system for late versions of F-111 aircraft, left, provides improved all-weather capability for supersonic automatic flight. System at right now is in volume production.

Equipment

Government Products and Industrial Products divisions comprise the new Equipment Group.

Government Products Division

The Government Products division had a record high year in carrying forward its established production work and entering new fields.

Major programs in radar development and production were advanced. TI demonstrated the first completely solid state radar in 1967. It contains a microwave module developed for the MERA program previously mentioned, and uses the company's developing solid state microwave technology to offer a significant improvement over conventional radar reliability and performance. Small hand-held radars which have potential commercial and military applications are now made possible as a result of these achievements. TI has such a miniature radar under development.

Development contracts for two new antisubmarine warfare radars and one new forward-looking radar were received during the year, and it is significant to note that development programs are underway for follow-on generations of every type of airborne radar system TI currently builds.

The division received substantial production contracts for radars that provide terrain-following, navigation, and other mission functions for RF-4 Phantom, A-7 Corsair II, and F-111A aircraft. Other types were delivered for antisubmarine warfare applications and for air traffic control systems.

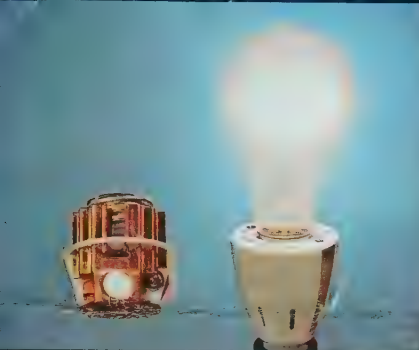
The prime objective of a growing program in electro-optics is to give military customers equipment that senses infrared energy rather than visible light. TI draws upon such diverse technologies as optics, materials, electromechanics, cryogenics, electronics, photography, and system engineering to develop infrared systems to help solve the "night vision" problem.

Production contracts were awarded the division in 1967 to provide infrared mapping systems for Army, Navy, and Air Force reconnaissance aircraft. Forward-looking infrared (FLIR) systems present pilots with a continuous television-like picture of what is below and ahead of their aircraft, even in darkness or foul weather. TI began to produce advanced FLIR systems in 1967 for the U. S. Navy and U. S. Air Force.

Shrike missile production continued. New production contracts brought the total awards to TI for airframe, guidance, and control development and production of this air-to-ground anti-radar missile to approximately \$70 million since the program began. Research and development for advanced versions of this missile continues.

The division also has coupled guidance and control to conventional aerial bombs to increase accuracy of delivery. Other ordnance work, opening a new area of volume production, began with receipt of a \$6-million contract to build solid state proximity fuzes for artillery projectiles.

TI capabilities to design and build special-purpose digital data handling equipment are being used in a program to develop an Air Force system for tactical interpretation of reconnaissance information and in a program to produce



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More than 15,000 integrated circuits are used in this advanced digital seismic data processing system TI builds for the geophysical exploration industry.

shipboard data processors the Navy will use to calculate position from navigation satellite information.

TI received another important contract for \$35-million for classified electronics equipment. Additionally, division capabilities in systems studies were applied to such subjects as air-to-ground attack, reconnaissance, and weapons selection and delivery for the U. S. Government and for the governments of several other NATO countries.

Industrial Products Division

Sales of this division equalled those achieved in 1966 and reflected the general levelling off of business in the semiconductor manufacturing and geophysical exploration markets. These two industries are major sources of business for the division's equipment and systems. TI's own internal requirements in these areas continued to provide both an impetus and a testing ground for product development.

Business for the TI Model 553 integrated circuit test system was particularly strong. Its system capability was extended to test linear as well as digital integrated circuits.

A simplified tape transport, announced for use with computer systems, improves reliability of operation through use of electronic functions to replace mechanical functions. Another new product of the division, developed for use in the expanding field of factory systems, was the advanced factory data collection system (TACTICOM*). It allows production information to be accumulated on magnetic tape or input directly to a computer.



Infrared interferometer spectrometer (IRIS) will orbit aboard Nimbus satellite in 1968 to measure temperature profile of earth's atmosphere.

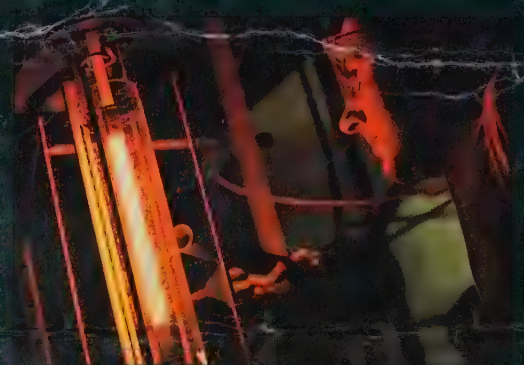


TI received its first production contract for substantial quantities of electronic proximity fuzes for use in a wide range of U.S. Army projectiles.

*Trademark of Texas Instruments.



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Detailed electronic function tests are performed by model 553 dynamic tester for linear and digital integrated circuits.



New tape transport replaces mechanical control linkage with electronic circuits to improve reliability, lower cost.

Digital seismic equipment of the division is sold to oil companies and geophysical contractors, including TI's Science Services division. International sales of the TI Model 10,000 Digital Field System were especially strong. A new model, the DFS III, was introduced — along with a system for geophysical exploration field use which makes possible partial seismic data processing at the point of data collection and cuts time requirements in central processing facilities.

The division also supplemented TI's broad line of strip-chart recorders with the *function/riter**, an advanced instrument for X-Y chart plotting.

Services

Two operations, the Science Services division and the Supply division, are part of the Materials and Services Group.

Science Services Division

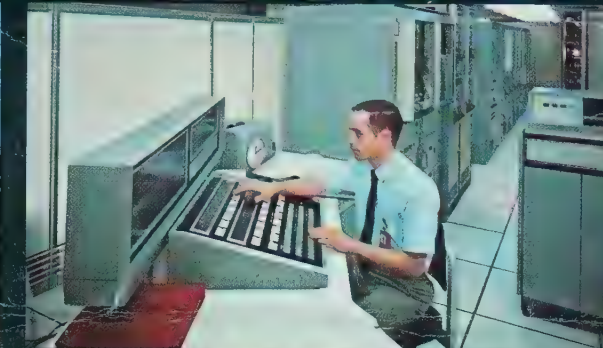
The division provides contract services in geophysical exploration to the petroleum industry; seismic, oceanographic, and related services to U. S. Government customers; and geological mapping services to the petroleum and minerals industries.

TI introduced its digital seismic data gathering and data processing technology to the petroleum exploration industry in 1964. This technology has continued its rapid displacement of analog seismic methods, and in 1967 grew to account for approximately half of petroleum industry expenditures for seismic exploration.

*Trademark of Texas Instruments.



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Modern ocean-going seismic exploration vessel equipped and assigned to operations in 1967.

The increase, from approximately one third of such expenditures in 1966, brought with it stronger competition from other contractors who began to offer digital seismic services or broadened their efforts in this field.

TI continued to lead this technology and had strong performance in digital seismic data processing operations. Two new digital data processing centers opened in Libya and Australia, bringing to ten the number of such centers operated by TI to serve customers around the world.

Data gathering operations, particularly in marine geophysical programs, suffered from excessive operating costs. Field operations also were affected by a major softening in marine geophysical activity in the Gulf of Mexico, with the result that service contracts for continuous, long-run operations were replaced largely by shorter jobs in widely dispersed areas.

Land exploration activities increased as oil companies shifted their emphasis from the marine areas. An influx of capacity from other geophysical contractors, however, led to severe price competition in Canada.

Detailed programs to reduce field operating costs have been put into effect and are expected to result in significant improvements.

The company increased its investment in non-dynamite energy source equipment for both land and marine data collection, thus broadening its ability to serve clients. A company-owned radio communication facility, to be operational by mid-1968, is expected to im-

prove operational support and management control of TI's worldwide geophysical operations. Two modern 165-foot ocean going vessels, the *R. C. Dunlap* and the *Eugene McDermott*, were equipped and assigned to operations in the Eastern Hemisphere.

Earth sciences contract work for the U. S. Government grew in 1967. TI was awarded new research and development contracts by the U. S. Navy for studies applying geophysical digital data processing techniques to antisubmarine warfare studies. Environmental surveys of the oceans for the U. S. Navy Oceanographic Office, underway throughout the year, continue in 1968.

In the field of mineral exploration, TI introduced a new airborne exploration service which applies gamma-ray spectrometry to locating and mapping the distribution of radioactive elements such as uranium.

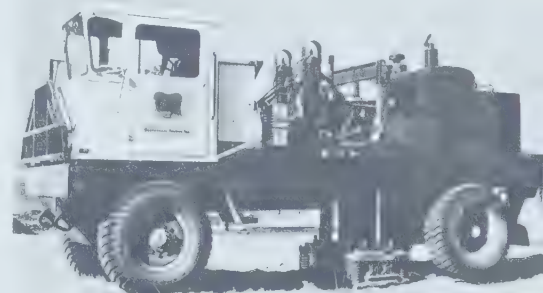
Supply Division

The Supply division achieved another record year in sales and is well established internationally as a major distributor of electronic and other industrial products.

Geographic coverage of this activity was expanded in North America and Europe, and the division added a service center in the U. S. for testing transistors and integrated circuits. This new service, first established in Houston, will be operating in the New York area in 1968. A unique service among distributors of electronic supplies, it provides sophisticated test equipment and engineering test services for customers.



Sensor is lowered from U. S. Navy oceanographic ship to obtain temperature, depth and salinity data.



Geophysical exploration activities increased use of non-dynamite energy sources such as this VIBROSEIS equipment.*

**Trademark and Servicemark of Continental Oil Company.*



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Circuit board is checked out for customer at TI Supply Testing Service Center.

Other new facilities include a connector assembly and service warehouse in Clark, New Jersey; a warehouse and sales center in Chicago; and a sales office in St. Louis.

Managing Innovation

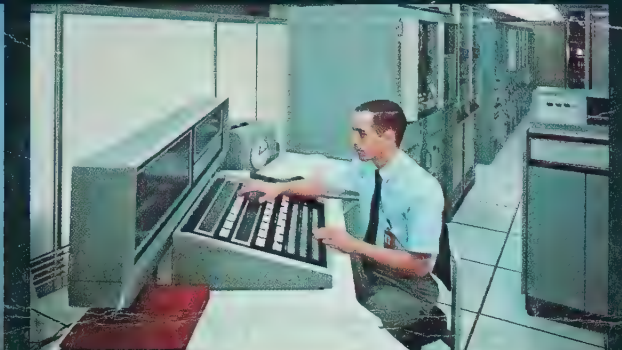
Texas Instruments has set about creating change, as a deliberate process, through planned innovation. The preceding review of 1967 operations illustrates the process applied to creating, making, and marketing products and services to solve problems for our customers. Changes made to improve our systems for managing innovation and to increase our effectiveness in utilizing resources, human as well as physical, are equally important.

Changes in OST—TI's Objectives-Strategies-Tactics system, developing as a formal mechanism since 1962, has been described in Annual Stockholders Meeting reports. Important changes introduced in 1967 will enable managers to achieve more fully the potential provided by the system for planning and control.

Basically a system for managing innovation, OST was first applied to long-range planning, then linked to annual planning and budgetary control. A program management system added within the OST framework integrates it with the everyday life of the operating manager and increases our ability to control our innovative efforts. It permits much improved control over assigning priorities and allocating skilled personnel and funds for technical efforts to strategic and tactical programs. The OST system has thus become a flexible organizational mechanism whereby resources can be brought to bear



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rapidly on specific problems and these same resources then redeployed to other problems on a timely basis.

The Objectives-Strategies-Tactics and the related program management system represent two of the many high quality management systems required by TI to organize its actions efficiently to achieve its purposes. Definition and implementation of such systems to serve the total informational, reporting, and control needs of the organization is a continuing effort. A significant additional step in 1967 was taken with installation of an advanced computing and data processing network having very large central computers and dispersed input-output terminals. The network, now capable of handling common systems formats and programs from many different operating areas, will be expanded in 1968.

Increasing Human Effectiveness—In November, we announced a major change in pay practice for U. S. hourly-paid TI employees, to be effective January 1, 1968. They now receive a salary instead of pay by the hour.

The step recognized the increased responsibility being extended to TI employees for managing their own work. It is part of a long-term effort directed toward having people at every level in the company more involved in planning, doing, and controlling their own and the work of their natural work group to solve problems and match and achieve personal and company goals. It is in contrast to the tradition that most work in industry requires only the special skills of workers and that it is the responsibility of management supervision alone

to organize and direct the work of others.

TI is taking a "team" approach which calls for working groups to analyze their own jobs and suggest improvements, set individual and group performance goals, measure their own achievement against these goals—and learn from their own mistakes.

The results are striking where team improvement efforts have been established. Over an 18-month period, operators on a germanium transistor manufacturing line exceeded by 20% their own performance goals for reducing production costs and increasing output. These goals were higher than standards previously set by supervisors. Absenteeism during the period averaged less than 1% of scheduled work hours. Team members on another mechanized assembly line introduced equipment improvements which cut labor costs at their point in the process by 40%. Assemblers working on magnetic and rotary components for radar equipment cut production time from 2.5 to 1.2 hours per unit over a 15-month period. Members of these groups reported interest in their work increased sharply.

This team approach to work, however, must be developed. In 1967, we established training programs to educate managers and supervisors for the broader leadership role the approach requires, and we began to encourage employees at all levels to participate as team members in individual and group goal-setting and problem-solving activities. Our goal is to have approximately 10,000 TI men and women involved in the team improvement efforts by the end of 1968, or early 1969.



Work team members take responsibility for setting own goals, monitoring progress, reporting results to supervisors.

We feel that Texas Instruments entered 1968 with added strength to continue pursuit of its long-range objectives. The outlook for 1968 is encouraging in many respects. We expect sales and earnings gains over 1967 and will continue our practice of keeping you informed on the company's performance as the year develops.

We wish also to express our sincere appreciation to our customers, our suppliers, the men and women of Texas Instruments, and to shareholders for your continuing strong interest and support.

P. E. Haggerty

P. E. Haggerty
Chairman of the Board

Mark Shepherd Jr.

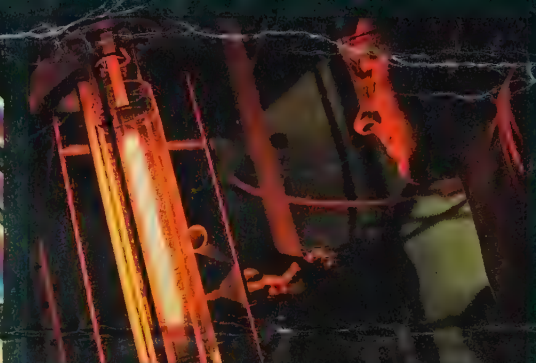
Mark Shepherd, Jr.
President

Dallas, Texas

February 28, 1968



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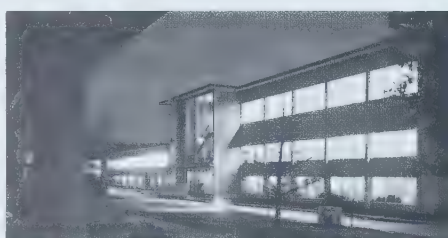


COMPONENTS

MAJOR FACILITY EXPANSION DURING 1967



New 2,000-sq ft industrial equipment building in Houston area occupied in September.



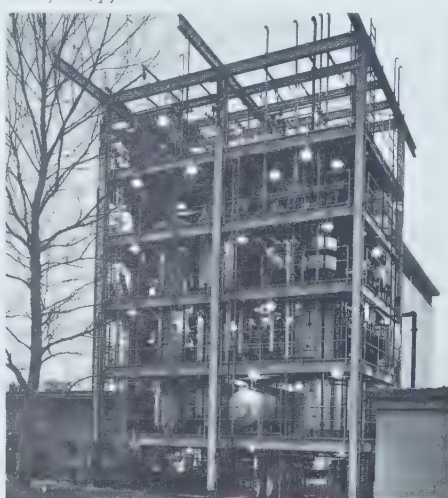
Plating building in Dallas was doubled in size to 33,000 sq ft.



Construction on new multipurpose 940,000-sq ft South building in Dallas was completed in late 1967.



TI France components plant on 50-acre hilltop site near Nice has new 24,000-sq ft extension.



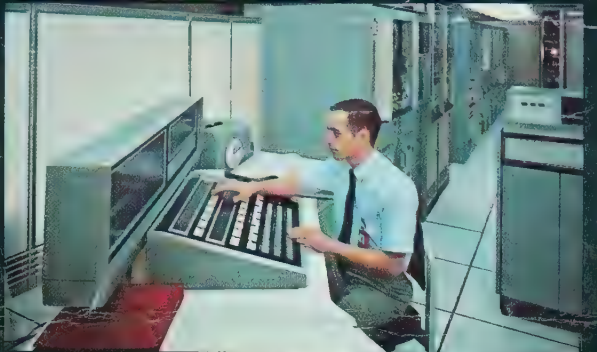
Trichlorosilane, from which ultra-pure silicon is made, is produced in liquid form in this Dallas chemical processing plant which became fully operational in 1967.



New TI Argentina plant for control products manufacturing now operating in Buenos Aires.



CONTROLS



EQUIPMENT



SERVICES

DIRECTORS AND OFFICERS

Directors

P. E. HAGGERTY, *Chairman*
 CECIL H. GREEN
 S. T. HARRIS, *Officer of the Board*
 J. E. JONSSON, *Honorary Chairman*

EWEN C. MACVEAGH
 EUGENE McDERMOTT
 MARK SHEPHERD, JR.
 C. J. THOMSEN

Corporate Officers

P. E. HAGGERTY, *Chairman of the Board and Chief Executive Officer*
 MARK SHEPHERD, JR., *President and Chief Operating Officer*

Components Group

J. FRED BUCY, *Group Vice President*
 WILLIS A. ADCOCK, *Vice President*
 JOHN R. BROUGHER, JR., *Vice President*
 STEWART CARRELL, *Vice President*
 C. M. CHANG, *Vice President*
 EDWARD S. HILL, *Vice President*
 GLENN E. PENISTEN, *Vice President*
 JAMES L. FISCHER, *Asst. Vice President*
 HOWARD MOSS, *Asst. Vice President*
 ROBERT PIERSON, *Asst. Vice President*

Equipment Group

R. C. DUNLAP, JR., *Group Vice President*
 A. RAY MCCORD, *Vice President*
 GRANT A. DOVE, *Asst. Vice President*
 JOSEPH P. RODGERS, JR., *Asst. Vice President*
 T. E. SMITH, *Asst. Vice President*
 GORDON K. TEAL, *Asst. Vice President*

Materials & Services Group

E. O. VETTER, *Group Vice President*
 PHILIP J. GOMEZ, *Vice President*
 JAY RODNEY REESE, *Vice President*
 MARK K. SMITH, *Vice President*
 RONALD F. KEENER, *Asst. Vice President*
 FRED C. OCHSNER, *Asst. Vice President*
 HANS A. WOLF, *Asst. Vice President*

Corporate Staff

WALTER F. JOYCE, *Senior Vice President*
 BRYAN F. SMITH, *Senior Vice President and Secretary*
 C. J. THOMSEN, *Senior Vice President*
 CECIL P. DOTSON, *Vice President*
 R. W. OLSON, *Vice President*
 JOHN M. WALKER, *Vice President and Controller*
 JOHN F. WILSON, *Vice President*
 H. J. WISSEMAN, *Vice President*
 MARVIN H. BERKELEY, *Asst. Vice President*
 J. ROSS MACDONALD, *Asst. Vice President*
 WILLIAM J. ROCHE, *Asst. Vice President and Asst. Secretary*
 GEORGE E. LIVING, *Treasurer*
 SOL GOODELL, *Asst. Secretary*
 JOHN R. VANDEVOORT, *Asst. Secretary*

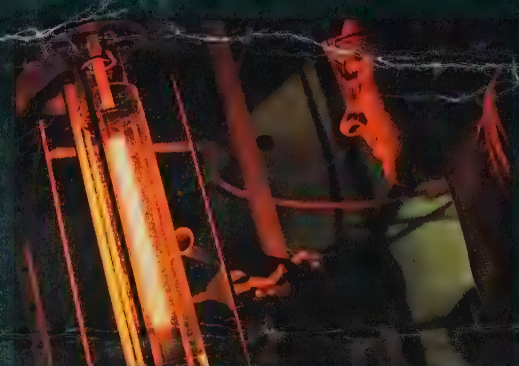
Common Stock Listed on New York Stock Exchange

Transfer Agents Registrar and Transfer Company (New York),
 Republic National Bank of Dallas

Registrars Morgan Guaranty Trust Company of New York,
 First National Bank in Dallas



RESEARCH



MATERIALS



COMPONENTS

TEN-YEAR REVIEW

*In Thousands of Dollars
(Except earnings and dividends
per share which are in dollars)*

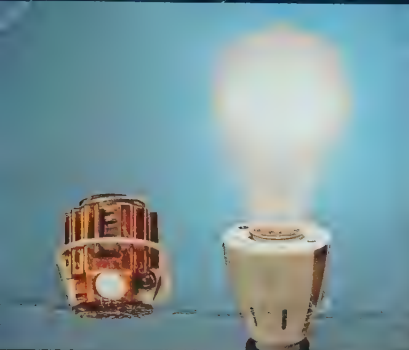
Texas Instruments Incorporated
and Subsidiaries

Operations

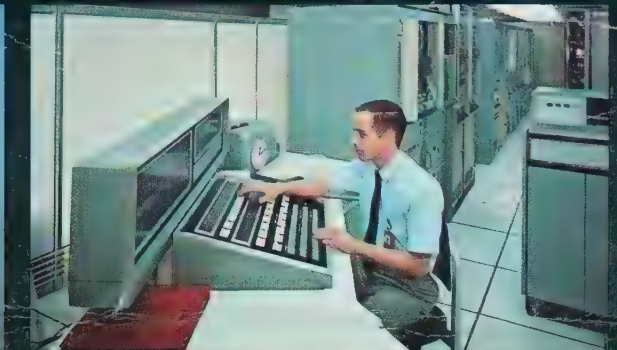
| | |
|--|--|
| Net sales | |
| Income before provisions for income taxes, redeterminations, and renegotiation | |
| Provisions for income taxes, redeterminations, and renegotiation | |
| Net income | |
| Earned per common share† | |
| — outstanding at year-end | |
| — average outstanding during year | |
| Cash dividends paid per common share† | |

Financial Condition

| | |
|--|--|
| Total current assets | |
| Total current liabilities | |
| Working capital | |
| Property, plant, and equipment at cost | |
| Accumulated depreciation | |
| Property, plant, and equipment (net) | |
| Other noncurrent assets | |
| Long-term debt, less current portion | |
| Deferred incentive compensation | |
| Shareowners' equity | |
| Common shares† | |
| — outstanding at year-end | |
| — average outstanding during year | |



CONTROLS



EQUIPMENT



SERVICES

Years Ended December 31

| 1967 | 1966 | 1965 | 1964 | 1963 | 1962 | 1961 | 1960 | 1959* | 1958 |
|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| \$568,507 | \$580,314 | \$436,369 | \$327,579 | \$276,477 | \$240,693 | \$233,223 | \$232,713 | \$193,213 | \$91,954 |
| 41,098 | 63,722 | 46,273 | 34,857 | 25,087 | 16,381 | 19,892 | 29,435 | 28,855 | 12,936 |
| 18,243 | 29,768 | 21,434 | 16,816 | 12,948 | 7,824 | 10,446 | 13,947 | 14,712 | 6,935 |
| 22,855 | 33,954 | 24,839 | 18,041 | 12,139 | 8,557 | 9,446 | 15,488 | 14,143 | 6,001 |
| 2.10 | 3.14 | 2.46 | 1.80 | 1.21 | .85 | .94 | 1.57 | 1.43 | .74 |
| 2.11 | 3.30 | 2.46 | 1.80 | 1.22 | .85 | .95 | 1.57 | 1.44 | .74 |
| .75 | .55 | .50 | .40 | .32 | .24 | — | — | — | — |
| \$242,915 | \$253,705 | \$186,721 | \$123,500 | \$105,967 | \$90,263 | \$82,479 | \$72,351 | \$64,842 | \$36,970 |
| 97,520 | 112,142 | 89,072 | 65,627 | 50,985 | 37,216 | 36,280 | 35,197 | 37,266 | 18,900 |
| 145,395 | 141,563 | 97,649 | 57,873 | 54,982 | 53,047 | 46,199 | 37,154 | 27,576 | 18,070 |
| 242,579 | 200,126 | 139,175 | 106,349 | 93,510 | 81,651 | 78,736 | 73,676 | 60,806 | 26,773 |
| 103,696 | 76,374 | 57,960 | 49,995 | 45,658 | 39,017 | 33,699 | 27,646 | 20,083 | 10,281 |
| 138,883 | 123,752 | 81,215 | 56,354 | 47,852 | 42,634 | 45,037 | 46,030 | 40,723 | 16,492 |
| 5,564 | 5,903 | 3,544 | 1,003 | 627 | 433 | 453 | 285 | 429 | 329 |
| 289,842 | 271,218 | 182,408 | 115,230 | 103,461 | 96,114 | 91,689 | 83,469 | 68,728 | 34,891 |
| 54,265 | 51,935 | 48,708 | 3,937 | 5,700 | 7,463 | 9,225 | 10,988 | 12,000 | 9,250 |
| 1,443 | 1,963 | 1,082 | — | — | — | — | — | — | — |
| \$234,134 | \$217,320 | \$132,618 | \$111,293 | \$97,761 | \$88,651 | \$82,464 | \$72,481 | \$56,728 | \$25,641 |
| 10,877,119 | 10,800,240 | 10,096,526 | 10,048,430 | 9,987,520 | 9,870,594 | 9,861,436 | 9,811,850 | 9,786,824 | 8,142,470 |
| 10,845,663 | 10,291,973 | 10,091,248 | 10,011,217 | 9,894,919 | 9,866,837 | 9,836,509 | 9,801,803 | 9,755,055 | 8,142,470 |

Operations of Metals & Controls Corporation are included for the first time in 1959, the year it merged into TI, as a "pooling of interests."

*Adjusted for 2-for-1 stock split in 1966 and for the 25% stock distribution in 1963. Earnings per share are computed after preferred dividends in 1959-63. (There was no preferred stock outstanding in 1953 or subsequent to 1963.)



RESEARCH



MATERIALS



COMPONENTS

CONSOLIDATED FINANCIAL STATEMENTS

*In Thousands of Dollars
(Except earnings per share
which are in dollars)*

Texas Instruments Incorporated
and Subsidiaries

For the year ended

Income and Retained Earnings

| | <i>December 31 1967</i> | <i>December 31 1966*</i> |
|---|-----------------------------|------------------------------|
| Net sales | \$568,507 | \$580,314 |
| Operating costs and expenses | | |
| Cost of goods and services sold | 427,466 | 406,883 |
| General, administrative, and marketing | 87,647 | 85,023 |
| Employees' retirement and profit sharing plans | 12,400 | 23,230 |
| Total | 527,513 | 515,136 |
| Profit from operations | 40,994 | 65,178 |
| Other income (net) | 3,105 | 1,415 |
| Interest on loans | (3,001) | (2,871) |
| | 41,098 | 63,722 |
| Provisions for income taxes, redeterminations, and renegotiation | 18,243 | 29,768 |
| Net income | 22,855 | 33,954 |
| Retained earnings at beginning of year | 141,908 | 113,891 |
| Cash dividends declared on common stock—1967—80¢ per share; 1966—57½¢ per share | (8,687) | (5,937) |
| Retained earnings at end of year | \$156,076 | \$141,908 |
| Earned per common share | | |
| —outstanding at year-end | \$ 2.10 | \$ 3.14 |
| —average outstanding during year | 2.11 | 3.30 |

Sources and Uses of Working Capital

| | | |
|--|-----------|-----------|
| Sources of working capital | \$ 22,855 | \$ 33,954 |
| Net income | 37,451 | 28,194 |
| Depreciation and amortization | 60,306 | 62,148 |
| Cash flow from operations | — | 53,573 |
| Proceeds (less expenses) from issuance of 599,031 shares of common stock | — | 3,337 |
| 4.80% sinking fund debentures due 1990 | 2,646 | 3,112 |
| Common stock under options | 2,330 | (193) |
| Long-term borrowing of overseas subsidiaries | 65,282 | 121,977 |
| Uses of working capital | | |
| Additions (net) to property, plant, and equipment | 52,521 | 70,658 |
| Dividends on common stock | 8,687 | 5,937 |
| Other | 242 | 1,468 |
| | 61,450 | 78,063 |
| Increase in working capital | \$ 3,832 | \$ 43,914 |

See accompanying notes.

**Certain items reclassified to conform with 1967 classification.*



CONTROLS



EQUIPMENT



SERVICES

Balance Sheet

Assets

Current assets

| | | |
|-----------------------------------|----------------|----------------|
| Cash and short-term investments | \$ 72,217 | \$ 85,643 |
| Accounts receivable | 95,982 | 95,422 |
| Inventories | 91,073 | 79,929 |
| Prepaid expenses | 4,341 | 5,205 |
| Deduct contract progress billings | (20,698) | (12,494) |
| Total current assets | <u>242,915</u> | <u>253,705</u> |

| | | |
|--|----------------|----------------|
| Property, plant, and equipment at cost | 242,579 | 200,126 |
| Less accumulated depreciation | 103,696 | 76,374 |
| | <u>138,883</u> | <u>123,752</u> |

| | | |
|-----------------------------------|------------------|------------------|
| Other assets and deferred charges | 5,564 | 5,903 |
| | <u>\$387,362</u> | <u>\$383,360</u> |

Liabilities and Shareowners' Equity

Current liabilities

| | | |
|---|---------------|----------------|
| Loans payable (overseas subsidiaries) | \$ 8,120 | \$ 6,432 |
| Accounts payable and accrued expenses | 55,058 | 53,417 |
| Income taxes, redeterminations, and renegotiation | 19,766 | 27,387 |
| Accrued retirement and profit sharing contributions | 12,400 | 23,286 |
| Dividends payable in January | 2,176 | 1,620 |
| Total current liabilities | <u>97,520</u> | <u>112,142</u> |

Deferred liabilities

| | | |
|----------------------------|---------------|---------------|
| Long-term debt | 54,265 | 51,935 |
| Incentive compensation | 1,443 | 1,963 |
| Total deferred liabilities | <u>55,708</u> | <u>53,898</u> |

Shareowners' equity (common shares outstanding:

| | | |
|-----------------------------------|------------------|------------------|
| 1967-10,877,119; 1966-10,800,240) | 234,134 | 217,320 |
| | <u>\$387,362</u> | <u>\$383,360</u> |

See accompanying notes.

*Certain items reclassified to conform with 1967 classification.



RESEARCH



MATERIALS



COMPONENTS

NOTES TO FINANCIAL STATEMENTS

OPERATIONS OUTSIDE UNITED STATES

Approximately 22% of consolidated net sales for 1967 was from operations outside the United States and a similar percentage of net assets at December 31, 1967, was located in such areas.

INVENTORIES

Inventories are stated at the lower of cost, replacement market or estimated realizable value. Cost is computed on a currently adjusted standard or average basis.

| | <i>Thousands of Dollars</i> | |
|---|-----------------------------|-----------------|
| | <i>1967</i> | <i>1966</i> |
| Materials and purchased parts | \$29,836 | \$25,455 |
| Work in process | 50,018 | 43,093 |
| Finished goods | 11,219 | 11,381 |
| | <u>\$91,073</u> | <u>\$79,929</u> |

PROPERTY, PLANT, AND EQUIPMENT

| | <i>Thousands of Dollars</i> | |
|-----------------------------------|-----------------------------|------------------|
| | <i>1967</i> | <i>1966</i> |
| Land | \$ 3,818 | \$ 3,650 |
| Buildings | 91,340 | 74,826 |
| Machinery and equipment | 147,421 | 121,650 |
| | <u>\$242,579</u> | <u>\$200,126</u> |

Depreciation on a major portion of fixed assets has been computed by either the double declining balance or the sum-of-the-years digits method.

LONG-TERM DEBT

| | <i>Thousands of Dollars</i> | |
|--|-----------------------------|-----------------|
| | <i>1967</i> | <i>1966</i> |
| 4.80% sinking fund debentures due 1990; annual sinking fund payments of \$2,500,000 commence in 1971 | \$50,000 | \$50,000 |
| Notes payable (overseas subsidiaries) | 5,638 | 3,947 |
| | <u>55,638</u> | <u>53,947</u> |
| Less amounts due within one year included in loans payable | 1,373 | 2,012 |
| | <u>\$54,265</u> | <u>\$51,935</u> |

Aggregate maturities of notes payable (overseas subsidiaries) during the five years subsequent to December 31, 1967, are as follows: 1968 — \$1,373,000; 1969 — \$1,969,000; 1970 — \$242,000; 1971 — \$168,000; 1972 — \$1,358,000.

RETIREMENT PLANS

Employees of the company and its principal subsidiaries are covered by non-contributory retirement plans. The company's policy is to fund retirement costs annually. Total expense under the plans was \$8,584,000 in 1967 and \$8,766,000 in 1966. During 1967, changes in the estimated rate of return on the fund and actuarial method funded all prior service costs, but had no significant effect on the company's net income. At December 31, 1967, the total of the retirement fund and balance sheet accruals exceeded the actuarially computed value of vested benefits.

SHAREOWNERS' EQUITY

Shareowners' equity consisted of the following:

| | <i>Thousands of Dollars</i> | |
|---|-----------------------------|------------------|
| | <i>1967</i> | <i>1966</i> |
| Cumulative preferred stock, \$25 par value; authorized 750,000 shares | \$ — | \$ — |
| Common stock, \$1 par value | | |
| <i>Year Shares</i> | | |
| Authorized | 12,500,000 | |
| Issued | 1967 — 10,906,486 | 10,906 |
| 1966 — 10,834,378 | | 10,834 |
| Additional paid-in capital | 67,152 | 64,578 |
| Retained earnings | 156,076 | 141,908 |
| | <u>\$234,134</u> | <u>\$217,320</u> |

Shares issued include 29,367 and 34,138 in 1967 and 1966, respectively, purchased for awards under the company's incentive compensation plan and included in other assets and deferred charges.

During 1967, \$72,000 was added to common stock and \$2,574,000 was added to additional paid-in capital as the result of the issuance of 72,108 shares on exercise of stock options.

STOCK OPTIONS AND RESERVATIONS OF COMMON STOCK

At December 31, 1967, 291,668 shares of common stock were reserved for then outstanding options (aggregate option price \$8,276,000) under a 1957 restricted stock option plan, of which 137,113 shares were then exercisable. Options are exercisable from time to time through 1973; exercise of the major portion is contingent upon attainment of specified earnings per share. This plan terminated as to further grants in 1965. During 1967, options on 57,818 shares (total consideration \$1,683,000) were exercised and options on 11,600 shares were terminated.

Also 581,375 shares of common stock were reserved at December 31, 1967, under a 1965 qualified stock option plan for officers and key employees, including 179,600 shares (aggregate option price \$16,525,000) for then outstanding options, of which 43,905 shares were then exercisable. These options expire five years from date of grant and become exercisable over the last four years of the option term in percentage installments, cumulatively, upon attainment of specified earnings per share. During 1967, options on 13,790 shares (total consideration \$952,000) were exercised and options on 11,225 shares were terminated.

In addition to the above, 634 shares were reserved at December 31, 1967, for options (aggregate option price \$13,000) granted in 1959 pursuant to a merger agreement. These options are presently exercisable and will expire in 1968. Options on 500 shares were exercised in 1967 for a total consideration of \$11,000.

Had the shares of common stock reserved at December 31 for all then outstanding options been shares actually outstanding from the first of the year there would have been no significant effect on the earnings per average share outstanding for 1966 and 1967.



CONTROLS



EQUIPMENT



SERVICES

ACCOUNTANTS' REPORT

*The Board of Directors
Texas Instruments Incorporated*

We have examined the accompanying consolidated balance sheet of Texas Instruments Incorporated and subsidiaries at December 31, 1967, and the related consolidated statements of income and retained earnings and of sources and uses of working capital for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. It was not practicable to confirm certain accounts receivable, as to which we satisfied ourselves by means of other auditing procedures.

In our opinion, the statements mentioned above present fairly the consolidated financial position of Texas Instruments Incorporated and subsidiaries at December 31, 1967, the consolidated results of their operations, and sources and uses of their consolidated working capital for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR YOUNG & COMPANY

Dallas, Texas
February 15, 1968

Annual Meeting of Stockholders

The 1968 Annual Meeting of stockholders of Texas Instruments Incorporated will take place at 10:00 a.m. (CST), April 17th, in the North Building Cafeteria at 13500 North Central Expressway, Dallas, Texas.

AR24



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